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09/763,704	02/26/2001	Matthias Witschel	49365	9140

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WASHINGTON, DC 20036

EXAMINER

ROBINSON, BINTA M

ART UNIT PAPER NUMBER

1625

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

84.

# Office Action Summary

Application No.

09/763,704

Applicant(s)

WITSCHER ET AL.

Examiner

Binta M. Robinson

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**Detailed Action**

Claims 1-12, 14-24 are now pending in the case.

The 112, second paragraph rejection of claim 22 at paper no. 15 is withdrawn in light of applicant's remarks filed 3/3/04. The part of the 112, first paragraph lack of enablement rejection of claims 14-16 at paper no. 15 for R5 equal to N-heterocyclyl groups is maintained.

The 112, first paragraph rejection of claims 6-9, 11, and 17-21 made at paper no. 15 is withdrawn in light of applicant's amendment filed 3/3/04.

The elected group I invention set forth at paper no. 10 which reads on claims 1-24, drawn to the compound of formula I where R1 are the radicals claimed except heterocycloxy or heterocyclthio, R2 and R3 are as claimed, R4 is the compound of formula IIa, R5 is OR7 halogen, SR7, R6 is as claimed, R7 is C-1-C6 Ak, a process for preparing a compound of formula I in claim 1 restricted as above, and a method for controlling undesirable vegetation utilizing the compound of formula I restricted as above, is examined below. The nonelected subject matter of claims 1-24 is withdrawn from consideration.

**(modified rejection)**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 3, 4, 5, 10, 12, 14, 15, 16, 17, 22, 23, 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is not sufficient description of what derivatives of the compound of formula I is being claimed. A derivative is not the same chemical species as the compound of formula I. In the absence of how to make derivatives of compounds of formula I being claimed, there is no umbrella coverage springing forth from the claimed compound of formula I and the examples of derivatives depicted in the specification.

Claims 14, 15, 16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for R5 in the compound of formula I equal to piperidinyl, furyl, thienyl, pyridyl, tetrahydroisoxazolyl, morpholinyl, pyrrolidinyl, triazolyl, imidazolyl, pyrazolyl, does not provide enablement for R5 equal to all N-linked heterocycles or any two radicals which are linked to the same carbon coming together to form rings. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Claim 24 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the using the disclosed compounds against the harmful plants disclosed on page 90 of the specification, does not provide enablement for a method for controlling all undesirable vegetation with the disclosed compounds. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. § 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

#### **The nature of the invention**

The nature of the invention in claims 1-24 is the process for preparing compounds of formula I, compositions comprising them and using these compounds or compositions comprising them for controlling harmful plants.

#### **The State of the Prior Art**

The state of the prior art is that quinoline and its derivatives are typically used as herbicides. (See Nicolaescu et. al. Reference U)

The literature discloses quinolinyl or fused phenyl derivatives, which are linked to an unsubstituted or substituted (1-hydroxy-3-oxo-cyclohex-1-en-2-yl) carbonyl radical. (See US patent 6479436 and US 5041681). CA Reference 110:95273, "Preparation and testing of (heterocyclecarbonyl)cyclohexanediones and -triones as herbicides", US Patent 5041681 discloses the quinolinyl containing compounds 1, 3-cyclohexanedione, 2-(2-quinolinylcarbonyl) and 1,3-cyclohexanedione, 4,4-dimethyl-2-(2-quinolineylcarbonyl) as herbicides.

#### **The predictability or lack thereof in the art.**

The level of predictability in the art is low since none of the actual data values for activity-against harmful plants of the claimed compounds and derivatives was disclosed in the specification. Additionally, experiments were only carried out against a few harmful plant varieties listed on page 90, although a method for controlling any harmful plant with the claimed compound is claimed.

#### **The breadth of the claims**

The breadth of the claims is that the compound of claim 1 can control any harmful plant.

#### **The quantity of experimentation needed**

The quantity of experimentation needed is undue experimentation. One of skill in the art would need to determine what harmful plants could be controlled by the claimed compound and whether the claimed compounds, even those not experimentally tested against the few plant varieties listed on page 90, can control harmful plant varieties.

Taking the above factors into consideration, it is not seen where the instant claim is enabled by the instant application.

#### **(new rejections)**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

Art Unit: 1625

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 3, 4, 7, 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5, 16, 17 of U.S. Patent No. 6479436 in view of Barton, US Patent 5426091. Although the conflicting claims are not identical, they are not patentably distinct from each other because for the following reason:

US 6479436 claimed the free hydroxyl derivative of the instant compound. (See claim 1, column 61, lines 40-50, where there is a hydroxyl group at the three position of the cyclohex-1-one ring) and disclosed the compound (See CAS attached, RN 205045-89-2P). The difference between the Otten '436 compound and the instantly claimed compound is that instead of a free hydroxyl group at the three position of the cyclohex-1-one ring, the instant claim is drawn to acyl, carbamate, ether, sulfonate, and acylate derivatives of the Otten '436 compound. Barton, '091, teaches herbicidal compositions containing the compounds of formula I wherein X1 and X2 are taught to be oxo and its enol tautomer wherein X1 or X2 can be bonded to H, and their acylated, ether, or sulfonated derivatives as optional, analogous choices. See the compounds of formula I, at column 1, lines 50-65 and column 2, lines 1-10. In view of Barton, it would have been obvious for one of skill in the art to synthesize the acylated, ether, or sulfonated derivatives of the enol tautomer of the Otten compound as herbicides. Accordingly, the compounds are deemed unpatentable therefrom in the absence of a showing of unexpected results for the claimed compounds over those of the Otten compounds.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10, 22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 of U.S. Patent No. 6479436 in view of Barton, US Patent 5426091. Although the conflicting claims are not identical, they are not patentably distinct from each other because for the following reason.

US 6479436 claimed the pharmaceutical composition containing the free hydroxyl derivative of the instant compound. (See claim 1, column 61, lines 40-50, where there is a hydroxyl group at the three position of the cyclohexe-1-one ring) and disclosed the compound (See CAS attached, RN 205045-89-2P). The difference between the Otten '436 herbicidal composition and the instantly claimed herbicidal composition is that instead of a free hydroxyl group at the three position of the cyclohexe-1-one ring, the instant claim is drawn to pharmaceutical compositions containing the acyl, carb<sup>a</sup>onate, ether, sulfonate, and acylate derivatives of the Otten '436 compound. Barton, '091, teaches herbicidal compositions containing the compounds of formula I wherein X1 and X2 are taught to be oxo and its tautomer wherein X1 or X2 can be bonded to H, and their acylated, ether, or sulfonated derivatives as optional, analogous choices. See the compounds of formula I, at column 1, lines 50-65 and column 2, lines 1-10. In view of Barton, it would have been obvious for one of skill in the art to synthesize



compositions containing the acylated, ether, or sulfonated derivatives of the enol tautomer of the Otten compounds as herbicides. Accordingly, the compositions are deemed unpatentable therefrom in the absence of a showing of unexpected results for the claimed compositions over those of the Otten compositions.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 11, 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 14 of U.S. Patent No. 6479436 in view of Barton, US Patent 5426091. Although the conflicting claims are not identical, they are not patentably distinct from each other because for the following reason.

US 6479436 claimed the process of preparing a herbicidally active composition containing the drug of the instant claims. (See claim 1, column 61, lines 40-50, where there is a hydroxyl group at the three position of the cyclohex-1-one ring) and disclosed the compound (See CAS attached, RN 205045-89-2P). The difference between the Otten '436 process of preparing the Otten composition and the instantly claimed process of preparing the instant composition containing the instant compound is that instead of a free hydroxyl group at the three

Art Unit: 1625

position of the cyclohex-1-ene ring, the instant claim is drawn to preparing compositions containing the acyl, carbamate, ether, sulfonate, and acylate derivatives of the Otten '436 compound. Barton, '091, teaches herbicidal compositions containing the compounds of formula I wherein X1 and X2 are taught to be oxo and its tautomer wherein X1 or X2 can be bonded to H, and their acylated, ether, or sulfonated derivatives as optional, analogous choices. See the compounds of formula I, at column 1, lines 50-65 and column 2, lines 1-10. In view of Barton, it would have been obvious for one of skill in the art to develop a process of preparing compositions containing the acylated, ether, or sulfonated derivatives of the enol tautomer of the Otten compound as herbicidal compositions. Accordingly, the instant process of preparing the instant composition is deemed unpatentable therefrom in the absence of a showing of unexpected results for the claimed process over those of the Otten process of preparing the Otten composition.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12, 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 15 of U.S. Patent No. 6479436 in view of

Barton, US Patent 5426091. Although the conflicting claims are not identical, they are not patentably distinct from each other because for the following reason:

US 6479436 claimed the method for controlling undesirable plant growth, which comprises allowing a herbicidally active amount of at least one of the Otten compound to act on the undesirable plants, seeds, or their habitat. (See claim 1, column 61, lines 40-50, where there is a hydroxyl group at the three position of the cyclohex-1-one ring) and disclosed the compound (See CAS attached, RN 205045-89-2P). The difference between the Otten '436 method for controlling undesirable plant growth with the Otten compound and the instantly claimed method of controlling undesirable plant growth with the instant compound is that instead of a method of controlling undesirable plants, seeds, or habitats with a compound of formula I where there is a free hydroxyl group at the three position of the cyclohex-1-one ring, the instant claim is drawn to a method of controlling undesirable seeds, plants, or habitats with the acyl, carbamate, ether, sulfonate, and acylate derivatives of the Otten '436 compound. Barton, '091, teaches herbicidal compositions containing the compounds of formula I wherein X1 and X2 are taught to be oxo and its tautomer wherein X1 or X2 can be bonded to H, and their acylated, ether, or sulfonated derivatives as optional, analogous choices. See the compounds of formula I, at column 1, lines 50-65 and column 2, lines 1-10. In view of Barton, it would have been obvious for one of skill in the art to control seeds, plants, or habitats with the acylated, ether, or sulfonated derivatives of the enol tautomer of the Otten compounds. Accordingly, the instant method of controlling undesirable plants with the instant compounds are deemed unpatentable therefrom in the absence of a showing of unexpected results for the claimed method over those of the Otten method.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 5, 6, 7, 8, 9, 11, 14, 18, 19, 20, 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. In claims 6, 7, 8, 9, 18, 19, 20, and 21 are indefinite, the term “compounds” is indefinite. It is unclear as to whether or not a composition is being prepared or a compound. A compound by definition, consists of one compound, whereas a composition consists of two or more compounds. Is the applicant claiming the process of preparing a compound or a composition?

B. Claim 11 is indefinite because it is not a proper process of preparing claim. A process of preparing a composition does not carry patentable weight.

C. In claim 14, line 3, page 30, the phrase “and their agriculturally useful salts” is indefinite. Claim 14 is simultaneously claiming one derivative and yet claiming useful salts. Is the applicant claiming a compound claim or a composition claim?

D. In claim 1, line 17, page 6 of the amendment filed 3/3/04, and everywhere else throughout claims 1, 5, 14 the phrase “two radicals, which are linked to the same carbon, together form” is ambiguous. It is unclear as to which two radicals are being referred to, and as to what rings are being formed.

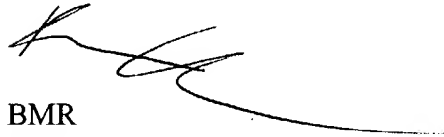
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binta M. Robinson whose telephone number is (571) 272-0692.

The examiner can normally be reached on M-F (9:30-6:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699.

A facsimile center has been established. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machine are (703)308-4242, (703)305-3592, and (703)305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1600.



BMR  
April 19, 2004



CEILA CHANG  
PRIMARY EXAMINER  
GROUP 1200-1625